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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,996

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Boris Y. Tsirlin

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1995

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05/21/2007

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EXAMINER

DAO, MINH D

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/604,996

Applicant(s)

TSIRLINE ET AL.

Examiner

MINH D. DAO

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 02/15/07 with respect to claims 15-19, 21-25 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine reference Forster and the Admitted Prior Art was to keep the insertion loss, mismatch, undesirable coupling among elements to a minimum.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-19, 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forster (US 2004/0195319) in view of Admitted Prior Art (APA) submitted by Applicant and further in view Wuidart et al. (US 7,023,391).

Regarding claim 15, Forster teaches a near field coupling device comprising: a plurality of lines electrically interconnected in parallel (see figs. 9,10; section [0083]); and a terminating resistor coupled to the lines (see section [0116]). However, Forster does not mention a ground plane spaced away from the plurality of lines. Admitted Prior Art submitted by Applicant in fig. 1 of the specifications teaches such limitation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching of Admitted Prior Art submitted by Applicant in order to keep the insertion loss, mismatch, undesirable coupling among elements to a minimum.

Still regarding claim 15, the combination of Foster and the APA does not mention that the terminating resistor is selected not to match a characteristic impedance of the

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plurality of lines. Wuidart, in an analogous art, teaches an antenna 30, which serves as a near field coupler, having a plurality of electrically parallel inductances [L11-L14], which serves as transmission lines, coupled to an unmatched load (i.e., resistor RI) (fig. 3B; col. 1, lines 5-27; col. 3, lines 8-48; col. 4, lines 35-46; col. 5, lines 6-16; and col. 7, lines 32-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the above teaching of Wuidart to Foster and the APA in order to improve the efficiency of the circuit by optimizing its impedance as taught by Wuidart (see col. 1, lines 5-27).

Regarding claim 16, the combination of Forster, APA and Wuidart teaches the near field coupling device of claim 15, wherein the plurality of lines are formed as at least a first trace on a printed circuit board and the ground plane is formed as a second trace on a printed circuit board (see figs. 2a and 2b of APA).

Regarding claim 17, the combination of Forster, APA and Wuidart teaches the near field coupling device of claim 15, wherein at least one of the plurality of lines has a zig-zag characteristic (see figs. 9 and 10 of Forster).

Regarding claim 18, the combination of Forster, APA and Wuidart teaches the near field coupling device of claim 15, wherein the plurality of lines are spatially aligned coplanar and parallel to each other (see figs. 1, 2a, 2b of APA).

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Regarding claim 19, the combination of Forster, APA and Wuidart teaches the near field coupling device of claim 15, wherein the length, width and interspacing of the plurality of lines is selected for a desired bandwidth (see Forster sections [0070-0071]).

Regarding claim 21, the combination of Forster, APA and Wuidart teaches a near field coupler for communication with a transponder located in a transponder operating region, comprising: a near field coupler having a plurality of lines coupled to a terminating resistor selected not to match a characteristic impedance of the plurality of lines (see Wuidart, fig. 3B; col. 1, lines 5-27; col. 3, lines 8-48; col. 4, lines 35-46; col. 5, lines 6-16; and col. 7, lines 32-45); the near field coupler receiving an RF communication signal and configured to produce an array of spaced near field concentrations responsive to the RF communication signal (see Forster, figs. 1-10), the spacing of said near field concentrations along a predetermined direction being significantly less than a smallest dimension of said transponder in said predetermined direction such that said transponder overlaps and is excited by a plurality of said field component when located in said transponder operating region (see Forster, figs. 1-10; sections [0083-0084]).

Regarding claim 22, the combination of Forster, APA and Wuidart teaches the coupler of claim 21 wherein said near field concentrations are formed by lines configured in an array with a spaced parallel geometry (see figs 9 and 10 of Forster).

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Regarding claim 23, the combination of Forster, APA and Wuidart teaches the coupler of claim 22 wherein said lines comprise leaky edges formed in a microstrip coupler (see figs. 2a, 2b of APA).

Regarding claim 24, the combination of Forster, APA and Wuidart teaches the coupler of claim 22 wherein said lines have a Zig-zag configuration (see figs. 9 and 10 of Forster).

Regarding claim 25, the combination of Forster, APA and Wuidart teaches the coupler of claim 22 wherein said lines are formed as a trace on a printed circuit board having a separate ground plane (see figs. 1, 2a and 2b of APA).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D. DAO whose telephone number is 571-272-7851. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW ANDERSON can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minh Dao   
AU 2618  
May 02, 2007



Matthew Anderson  
Supervisor AU 2618